La Verkin Creek Bridge
Spanning La Verkin Creek on State Route 17
0.7 miles northwest of La Verkin
Washington County, Utah

HAER No. UT-81

HAER

UTAH

27-LAVE V,

1-

PHOTOGRAPHS WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
Rocky Mountain Regional Office
National Park Service
P.O. Box 25287
Denver, Colorado 80225-0287

HAER No. UT-81 (page 1)

HAER UTAH 27-LAVE*N*,

1-

HISTORIC AMERICAN ENGINEERING RECORD La Verkin Creek Bridge

I. INTRODUCTION

Location:

Spanning La Verkin Creek on State Route-17 0.7

miles northwest of La Verkin, Washington

County, Utah.

Quadrangle:

Hurricane, UT 7.5', 1986

UTM:

298120E 4121420N

Date of Construction:

1930

Present Owner:

Utah Department of Transportation

Present Use:

Vehicular Bridge

Significance:

The La Verkin Creek Bridge is a standard Utah State Road Commission concrete deck girder bridge design. Its significance lies in its role as part of the highway system in Utah's "Color Country," which was established to accommodate the burgeoning tourist industry in the region.

Authors:

Kim A. Hyatt, Architect

James R. Christensen, Intern Architect

Smith Balle Hyatt Architects

Bountiful, Utah.

Photographer:

Kim A. Hyatt, Architect

Smith Balle Hyatt Architects

Bountiful, Utah.

II. HISTORY

As the Mormon pioneers moved south across the Utah territory, they created a primitive system of roads for their travels. In the mid 1800s, one of these roads was established through Ash Creek Canyon in Washington County. Later in the twentieth century, State Route 17 would follow this path that was forged by the early colonists.

In 1858, the small farming community of Virgin was settled by colonists under the leadership of Nephi Johnson. Their directive from the authorities of the Mormon church was to establish a community of cotton plantations, sugar cane fields, vineyards, orchards, and silk cultures on the north bank of the Virgin River. Their crops flourished in the benign climate of southern Utah and were very much in demand in the northern settlements of the isolated Mormon community. This southern territory would later be known as "Utah's Dixie." Eventually, a wagon road was built to connect the settlements of Virgin and other nearby communities with the northern settlements.

In 1898, the town of La Verkin was established on the north bank of the Virgin River, just south of La Verkin Creek. Later, in 1906, the settlement of Hurricane was founded just a few miles to the south on the opposite bank of the river. Both of these towns sprang to life with the construction of the Hurricane Canal, which diverted water from the river to the higher terraces. The two communities flourished. The fertile ground of the benches yielded a wide variety of

crops that were in high demand in the northern valleys of the territory. The products harvested in the area included grapes, figs, nuts, berries, melons, silks, alfalfa, and a a variety grains.²

In 1909, the region received an economic boost when President Howard Taft created Mukuntuweap National Monument within Zion Canyon. Now, in addition to its agricultural base, the local economy benefitted from the increasing tourist traffic.³

In 1914, the road from Toquerville north to Cedar City was improved by a group of inmates from the Utah State Penitentiary. The following year, the route from Toquerville to Hurricane was improved with funds generated by the local communities.⁴ As a result of these improvements, the La Verkin-Toquerville road became the primary route for tourist traffic and for the shipping of agricultural products to northern markets.

The Mukuntuweap National Monument was enlarged in 1918 by President Woodrow Wilson. One year later, Congress changed the monument to Zion National Park. This change caused the traffic in the area, especially that within the Park, to double between 1919 and 1920, as tourists flocked to the area to see the wonders of Zion Canyon. By 1930, the numbers visiting the Park had increased to more than 55,000 people, annually.⁵

The Park also attracted major investors to the area. One of those that would have a major effect on the highway system was the Union Pacific Railroad. In the

early twenties the corporation announced its intentions to develop the necessary facilities (i.e. rail networks, stations, and worker housing) to exploit the attractions of the region's national parks. To do this, however, the railroad insisted that the highway system be improved. Specifically, the company requested that the highway between Toquerville and La Verkin be upgraded to an all-weather road. This was to be an extensive project that would involve returning the road to the west bank of Ash Creek from where it had been moved by the early pioneers, in 1868.6

The federal government was willing to aid the upgrading of the road, but Washington County did not have the local portion of the funds needed to guarantee that the project would be completed. To see that the road was built, the County borrowed \$35,000 from a variety of local banks in several Utah communities. The loans were guaranteed by fifteen \$1,000 notes, each endorsed by a prominent citizen of the County. Eventually, the State Board of Examiners requested that the legislature make an appropriation to repay the County's indebtedness. Thus Federal-Aid Project 12 was executed, and State Route 17 created.

In 1930, in order to facilitate the increased flow of traffic in the area and to help alleviate the effects of the Great Depression by creating jobs, the State Road Commission made plans to further upgrade many roads within the State. In Washington County, the State appropriated \$75,000 to the further improvement of the road between La Verkin and Toquerville. The project would include the grading and graveling of the road, as well as the replacement of two antiquated bridges along

the route. The new bridges would be those spanning Ash Creek at Toquerville and La Verkin Creek in La Verkin.8

III. THE LA VERKIN CREEK BRIDGE

On March 26, 1930, the Utah State Road Commission issued a design for a cast-in-place concrete vehicular bridge on State Route 17, prepared by an engineer identified as J.A.U. and approved by Maurice Housecroft, Chief Bridge Engineer. The bridge would be constructed as Federal Aid Project No. 81-d, and the construction company of Whitney and Reynolds was contracted to complete the project at La Verkin Creek.9

The bridge would replace a short wooden bridge built in 1908 by the State.¹⁰ This original bridge was consistently threatened with collapse or washout, as the creek, prone to flooding in heavy rains, eroded its foundations. The new La Verkin Creek bridge, with a span of 108 feet, would eliminate this problem. The longer span also gave the creek more room to flow during flood conditions. Another advantage of the concrete bridge over its wooden predecessor was its mass. The weight of the concrete could resist the heavy flow of flood waters more effectively than that of the wooden bridge, thereby reducing the risk of washout.

The main span of 52 feet, which crosses the center of the channel, is spanned by a concrete deck girder design. The primary girders are decorated with a bush-hammered relief. The principal span is flanked on each side by 28-foot girder

approach spans. The girders, with angled haunches, are supported by a pair of steel-reinforced concrete pour-through piers and by the concrete abutments on either bank of the creek.

The upper deck, which carries the roadway, measures 20 feet in width; in 1930, this was an acceptable width for two-way highway traffic. The traffic is contained on the bridge by four-inch wrought-iron-pipe guard rails secured by concrete pillars.

The bridge was completed within the year by Whitney and Reynolds. The construction of the bridge required 223 cubic yards of Class A concrete, 1,405 sacks of cement, 9.8 cubic yards of sand, 1,960 cubic yards of gravel, and 47,446 pounds of reinforcing steel.¹¹ The cost was \$11,060.76.¹² The bridge has remained elementally unchanged in the sixty-four years since its erection.

IV. SIGNIFICANCE AND FUTURE

Today, State Route 17 is classified as a minor rural arterial. In 1937, the highway's significance was greatly reduced when the Hurricane Bridge over the Virgin River was completed on the new State Route 9, known as the Zion Highway. The new steel-arched Hurricane Bridge provided a more direct route to Zion National Park from St. George, Utah. State Route 17 became a mere by-pass highway used by those coming from Cedar City, Utah, and other points north of the Park, and by local traffic.

On the Utah Historic Bridge Inventory, the bridge over La Verkin Creek was categorized as a "typical example of Utah State Road Commission standard beam bridge design of 1930's." In 1993, the bridge was classified as functionally obsolete. One reason for this classification is the bridge's narrow deck, which is believed to create a potentially dangerous traffic situation along the highway. The La Verkin Creek bridge is still in use, but has been scheduled for replacement.

V. PROJECT INFORMATION

This Historic American Engineering Record (HAER) recording project was requested by the Utah State Preservation Office. Kim A. Hyatt, Architect, and James R. Christensen, Intern Architect, were responsible for documenting and researching the history of the La Verkin Creek Bridge in Washington County, Utah. This report was prepared during the autumn of 1994.

VI. ENDNOTES

- 1. Roylance, Ward J., <u>Utah: A Guide to the State, Part 2.</u> (Salt Lake City, Utah: Utah Arts Council, 1982), p. 658.
- 2. Ibid., pp. 656-657.
- 3. Ibid., p. 385.
- 4. Montergomery, Jacki A., <u>A Cultural Resources Inventory Along Utah Department of Transportation's State Route 9 and State Route 17 in the Area of Hurricane and La Verkin, Washington Co., Utah STP-BRF-0017(21)1 & *NH-009()11; (Bluff, Utah: Abajo Archaeology, February 1994), p. 5.</u>

- 5. Woodbury, Angus M.; <u>A History of Southern Utah and Its National Parks</u>; (Salt Lake City, Utah: By the Author, 1950); p. 203.
- 6. Knowlton, Ezra C.; <u>History of Highway Development in Utah</u>; (Salt Lake City, Utah: Utah State Road Commission, 1967); p. 236.
- 7. Ibid., p. 236.
- 8. "Much Road Work In Eastern Utah Planned for 1930," The Times Independent, 2 January 1930.
- 9. Negative of Original Construction Drawings, "La Verkin Creek Bridge," (Salt Lake City, Utah: Utah Department of Transportation.)
- 10. Brooks, Juanita; <u>Under Dixie Sun:</u> (Panquitch, Utah: Utah Daughters of Pioneers, Washington Co. Chapter, 1950); p. 396.
- 11. Negatives of Original Construction Drawings, "La Verkin Creek Bridge," (Salt Lake City, Utah: Utah Department of Transportation).
- 12. Fraser, Clayton; La Verkin Creek Bridge (No. OD-292-01); Utah Historic Bridge Inventory. (Salt Lake City, Utah: Utah Department of Transportation.)
- 13. Ibid.
- 14. La Verkin Creek Bridge (Structure No. 0D-292-01), Structural Inventory and Appraisal Sheet, National Bridge Inventory. Salt Lake City, Utah: Utah Department of Transportation, 1993.

VII. BIBLIOGRAPHY

A. BOOKS

Roylance, Ward J.; <u>Utah: A Guide to the State, Part 2:</u> (Salt Lake City, Utah: Utah Arts Council, 1982).

Knowlton, Ezra C.; <u>History of Highway Development in Utah:</u> (Salt Lake City, Utah: Utah State Road Commission, 1967).

La Verkin Creek Bridge HAER no. UT-81 (page 9)

Woodbury, Angus M.; A History of Southern Utah and National Parks; (Salt Lake City, Utah: By the Author, 1950).

Brooks, Juanita; <u>Under Dixie Sun: A History of Washington County</u>; (Panguitch, Utah: Daughters of Utah Pioneers, 1950.)

B. NEWSPAPER

The Times-Independent, 2 January 1930, "Much Road Work in Eastern Utah Planned for 1930."

C. MISCELLANEOUS

Fraser, Clayton; La Verkin Creek Bridge (No. 0D-292-01), Utah Historical Bridge Inventory. Salt Lake City, Utah: Utah Department of Transportation, n.d.

La Verkin Creek Bridge (Structure No. 0D-292-01), Structural Inventory and Appraisal Sheet, National Bridge Inventory. Salt Lake City, Utah: Utah Department of Transportation, 3-10-93.

Negatives of Original Construction Drawings, La Verkin Creek Bridge (F.A.P. 81-d) Salt Lake City, Utah: Utah Department of Transportation.

Montgomery, Jacki A.; <u>Cultural Resource Inventory along Utah Department of Transportation's State Route 9 and State Route 17 in the Area of Hurricane and La Verkin, Washington Co., Utah.</u> (STP-BRF-0017(21)1 & *NH-0009()11. Bluff, Utah: Abajo Archaeology, February 1994.

